ABSTRACT

The fuel cell, generating electric power from oxygen and hydrogen ions and comprising an anode (A), a magnetic cathode, comprising an active layer (2), and a proton electrolyte (1) between the anode and the cathode, comprises a network (3) of permanent magnets (4) designed to increase the diffusion of oxygen in the active layer. The centers of the magnets (4) of the network (3) of permanent magnets are preferably arranged with a two-dimensional distribution in a plane arranged at the interface between the electrolyte (1) and the active layer (2), the magnets being magnetized in parallel manner along the axis perpendicular to this plane. In this way, all the poles of one polarity (S) are surrounded by the active layer (2), all the poles of opposite polarity (N) being surrounded by the electrolyte (1).